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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/920,508	08/01/2001	James M. Carney	P6153	6336

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EXAMINER

NGUYEN, PHUONGCHI T

ART UNIT

PAPER NUMBER

2833

DATE MAILED: 01/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/920,508

Applicant(s)

CARNEY ET AL.

Examiner

Phuongchi T Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_. 6) ☐ Other:

### DETAILED ACTION

1. Applicant's amendment of November 20, 2002 is acknowledged. It is noted that claim 1 is canceled. Claims 2-4, 6, 9, 12, 14, 18 and 21-22 are amended.

#### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 2, 4-17 and 21-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Sherwood (US4197945).

In regard to claim 12, Sherwood discloses an apparatus (Attachment 1 and figure 4) comprising a housing (17) defining an interior cavity (B) sized to surround at least one pin connector (13); and a mechanism (19, 19, 21) for removably securing the housing (17) over the pin connector (13) and an aperture (C) extending through the housing (17) and isolated from the interior cavity (B).

In regards to claim 2, Sherwood discloses the apparatus comprising an the interior cavity (B) partitioned (25) into a plurality of cavities (B, A: where 13 and 15 located).

In regard to claim 4, Sherwood discloses the apparatus wherein the mechanism (19, 19, 21) for removably securing the housing (17) over the pin connector (13) comprises an aperture (A) for engaging a structure on the circuit board (15) (see figure 3).

In regard to claim 5, Sherwood discloses the apparatus wherein the aperture (A) has an irregular shape to create an interfering fit with the structure (35) on the circuit board (15).

In regard to claim 6, Sherwood discloses the apparatus further (attachment 1) comprising a mechanism (19, 19, 21) to enable removal of the housing (17) from around the pin connector (13).

In regard to claims 7 and 8, Sherwood discloses the apparatus wherein the mechanism (19, 19, 21) to enable removal comprises a pair of projections (19, 19) extending from a surface (21) of the housing (17) (see figure 3).

In regard to claims 9 and 10, Sherwood discloses the housing (17) is made of a semi-rigid material or resin (see column 3, lines 11-20).

In regard to claim 11, Sherwood discloses the housing (17) is formed by injection molding process (the injection molding process is equivalent to the process of extrusion).

In regard to claim 13, Sherwood discloses the apparatus wherein the mechanism (19, 19, 21) for removably securing the housing (17) to the pin connector (13) comprises a plurality of apertures (C, A) (see attachment 1).

In regard to claim 14, in addition to claim 1, Sherwood discloses the apparatus comprising a mechanism (31, 29, 33, 25) for aligning the interior cavity (B) of the housing (17) with the pin connector (13) (see attachment 1).

In regard to claim 15, Sherwood discloses the apparatus wherein the mechanism (31, 29, 33, 25) for aligning comprises at least one wall (29) of the housing (17) shaped to mimic a feature (31) of the pin connector (13) (see figure 3).

In regards to claim 16, Sherwood discloses the apparatus wherein the mechanism (31, 29, 33, 25) for aligning comprises at least one fin (19, 19) projecting from a surface (21) of the housing (17) to facilitate handling thereof.

In regard to claim 17, Sherwood discloses the apparatus wherein the mechanism (31, 29, 33, 25) for aligning comprises an aperture (C) accommodating a feature (35, 29, 25) of the pin connector (13) and circuit board (15).

In regard to claims 21 and 22, Sherwood discloses the apparatus wherein a pin connector (13) is disposed within the interior cavity (B) of the housing/housing means (17)(see attachment 1).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sherwood (US4197945) in view of Foley (US4749357).

In regard to claim 3, Sherwood discloses the claimed invention except for the teaching of a plurality of pin connectors. Sherwood does teach ~~the~~ <sup>the</sup> making apparatus any designed length. However, Foley teaches the electrical connector having a plurality of the pin connectors mounted on the board. It would have been to one ordinary skill at the time the invention was made to modify the apparatus of Sherwood to provide a plurality of the pin connectors on the board as taught by Foley for expanding the connector system.

6. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherwood (US4197945).

In regard to claim 18, Sherwood discloses a method (see attachment 1) for preventing damage or contamination of the pin connector comprising providing a protective cover (17) having an interior cavity (B) defined therein, for aligning the protective cover (17) with features (35) of the circuit board (15) and pin connector (13), and removably securing the protective cover (17) adjacent the circuit board (15) so that the pin connector (13) is disposed within the interior cavity (B) of the protective cover (17). The method taught by Sherwood is not specifically for a computer system.

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However, since circuit boards such as that of Sherwood are often in computer systems and frequently need protection, it would have been obvious to one having ordinary skill at the invention was made to use the method of Sherwood to protect the pin connector for a computer system.

In regard to claim 19, Sherwood discloses the apparatus (attachment 1) wherein the features (25, 27, 33, 35) comprise a projection (35) and wherein the mechanism (31, 29, 33, 25) for aligning comprises a surface (on 33) on the protective cover (17), and wherein aligning the protective cover (17) with the features (25, 27, 33, 35) so that the projection (35) is disposed along the surface (on 33) of the protective cover (17). Sherwood discloses generally all except for the cylindrical shape projection and the accurate shape surface. It would have been an obvious to modify the design of Sherwood by changing the shape of projection of the features and the surface on the cover to be a cylindrical shape projection and the accurate shape surface for ease assembly, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. in re Rose, 105 USPQ 237 (CCPA 1955).

In regard to claim 20, Sherwood discloses the apparatus wherein the features (25, 27, 33, 35) comprise a projection (35) and wherein the mechanism (31, 29, 33, 25) for removably securing comprises an aperture (A) within the protective cover (17) and wherein disposing the projection (35) within the aperture (A) to frictionally secure the projection (35) therein when the pin connector (13) is disposed within the cavity (B). Sherwood discloses generally all except for a cylindrical shape projection and an irregular shape aperture. It would have been an obvious to modify the design of Sherwood by changing the shape of projection of the features and the aperture to secure the projection of Sherwood to be a cylindrical shape projection and the irregular shape aperture for ease assembly, since such a modification would have involved a mere change in the shape of a

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component. A change in shape is generally recognized as being within the level of ordinary skill in the art. In re Dailey, 149 USPQ 47 (CCPA 1976).

***Response to Arguments***


7. Applicant's arguments with respect to claims 2-17 have been considered but are moot in view of the new ground of rejection.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchi T Nguyen whose telephone number is (703) 305-0729. The examiner can normally be reached on Monday through Thursday from 8:00AM to 4:30PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on (703) 308-2319. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7723 for regular communications and (703) 305-7723 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3329.

January 26, 2003

  
P. AUSTIN BRADLEY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

Attachment 1

United States Patent [19]  
Sherwood

[11] 4,197,945  
[45] Apr. 15, 1980

[54] PIN PROTECTOR

- [75] Inventor: Theodore R. Sherwood, Sunnyvale, Calif.  
[73] Assignee: The United States of America as represented by the Secretary of the Navy, Washington, D.C.

[21] Appl. No.: 728,497

[22] Filed: Sep. 30, 1976

- [51] Int. Cl.<sup>2</sup> ..... B65D 73/02  
[52] U.S. Cl. .... 206/328; 24/3 E;  
24/73 MF; 24/81 CC; 24/137 R; 24/257;  
174/138 G; 339/36  
[58] Field of Search ..... 24/3 E, 11 P, 67.5,  
24/67.9, 73 A, 73 MF, 81 CC, 137 R, 255, 257  
R, 259 PW; 174/138 D, 138 F, 138 G;  
206/328-329, 526-527; 317/101 DH; 339/36,  
44 R

[56]

References Cited

U.S. PATENT DOCUMENTS

3,019,500	2/1962	Duffin et al. ....	24/255 R X
3,225,922	12/1965	Straight .....	24/81 CC
3,322,381	5/1967	Bubb .....	24/255 P
3,388,227	6/1968	Basso et al. ....	24/137 R

FOREIGN PATENT DOCUMENTS

1533316 6/1968 France ..... 206/328

Primary Examiner—Herbert F. Ross  
Attorney, Agent, or Firm—R. S. Sciascia; Charles D. B. Curry; Francis I. Gray

[57]

ABSTRACT

An apparatus to removably enclose and thereby protect electrical connector pins attached to circuit boards. The pin protector has parallel flanges and a hinge to provide for the opening of an enclosing section to allow it to be placed about the pins. The memory properties of the hinge force the enclosing section to remain securely positioned. The pin protector is formed from an extrudible material and thus can be manufactured in any length without requiring the mold to be changed.

4 Claims, 4 Drawing Figures

